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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,155	12/20/2001	Christy L. Lee	01-628US	3386

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CATERPILLAR INC.  
100 N.E. ADAMS STREET  
PATENT DEPT.  
PEORIA, IL 616296490

EXAMINER

UNDERWOOD, DONALD W

ART UNIT	PAPER NUMBER
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3652

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. <u>10/028155</u>	Applicant(s) <u>Lee</u> <span style="float: right;">SW</span>	
	Examiner <u>Underwood</u>	Art Unit <u>3652</u>	

~The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10/20/03
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 12, 19, 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 10/20/03 is: a) ☐ approved b) ☒ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

### **Detailed Action**

1. The first Office action, i.e., paper no. 6 inadvertently listed claim 7 instead of claim 4 in paragraph 6. The following action corrects this error. Also a further review of Waka shows that the structure 28, 27, 28 meets the structure set forth in claim 5. Thus claim 5 is also included with claim 4 in the rejection utilizing Waka. The examiner regrets any inconvenience caused by this action.
2. Claims 18, 19 and 20 stand withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 5.
3. The drawing is objected to under 37CFR1.83(a) as failing to show and label a substantially flat reinforcing structure (claim 8) and a substantially cylindrical reinforcing structure (claim 9). Also 107, center of figure 1, should be 106. At best a sketch of any proposed amendment must be filed for review. The introduction of new matter should be guarded against.
4. Applicant's drawing proposal and remarks fail to address the lack of a showing of a substantially flat reinforcing structure. The addition of tubes in proposed figure 4 addresses a substantially cylindrical structure but is considered new matter. The change to figure 1 is acceptable; however, due to the new matter in proposed figure 4, the drawings changes have not been approved.
5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

This claim is indefinite since it fails to correlate the base portion and the rib portion with the reinforcing structure. A phrase similar to -- said reinforcing structure comprising -- inserted before "a base portion" in line 8 would obviate this indefiniteness.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 2, 3, 6, 8 and 9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Peterson.

It is inherent that the plates 74 and 76 and tube 122 (claim 9) are sized to receive the expected loads and/or are located at the points where these loads will occur since larger and/or heavier plates would increase weight and thus cost and it is desirable to hold manufacturing costs down and since the plates and tube are connected at connection points on the boom.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. Claims 1, 2, 3, 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson.

While the examiner is of the opinion that the structure in Peterson inherently meets the instant claims for the reasons set forth in the above rejection, it would have been obvious to size plates 74 and 76 and tube 122 to be no larger than needed to handle the expected loads because this would have saved manufacturing cost. Parts are conventionally manufactured to withstand the expected loads but not overdesigned to increase weight and size.

11. Claim 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waka.

Note elements 28 in Waka comprise bases and 27, a rib.

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson.

Peterson is silent on how his elements are assembled; however, laser welding is a conventional way of assembling metal structure and thus it would have been obvious to use laser welding to assemble the elements in Peterson.

13. Claims 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al in view of Peterson .

It would have been obvious to provide boom 5 in Kobayashi with plates and provide the cylinder mounts on the plates instead of attaching the mounts directly to the booms as in Kobayashi in view of the teaching in Peterson because this would better spread the loads to the boom. As for sizing the plates to reduce weight or to locate the plates at the selected attachment point to reduce weight, manufacturing dictates the

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former since weight sewing and thus cost are conventional manufacturing criteria and Peterson teaches the latter by locating his reinforcing at loading points.

14. Applicant's remarks that Peterson teaches one size fits all is speculative since Peterson does not teach using a fixed reinforcing plate on a plurality of different sized booms.

15. Applicant's remarks regarding Kobayashi and Peterson have been carefully considered but are not deemed persuasive for the reasons set forth in the preceding rejections utilizing Kobayashi and Peterson.

16. Any inquiry concerning this communication should be directed to D. Underwood at telephone number 703-308-1113.

Underwood/vs  
January 15, 2004

*Donald W. Underwood* 01/20/04  
**DONALD W. UNDERWOOD**  
**PRIMARY EXAMINER**